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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LU, FRANK WEI MIN	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,354	CROOK ET AL.	
	Examiner	Art Unit	
	Frank W. Lu	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-94 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-94 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-12, drawn to a method for determining three dimensional structure of a nucleic acid, classified in class 435, subclass 6.

II. Claims 13-26, 49-52, and 82-89, drawn to a method for identifying a binding site for a ligand on a biomolecular target (claims 13-26, 82-84, and 88) and a method for identifying binding sites of a biomolecular target for compound from a combinatorial library (claims 49-52, 85-87, and 89), classified in class 435, subclass 6 or 7.1.

III. Claims 27-35 and 53-55, drawn to a method for determining the relative binding affinity of a binding agent for a biomolecular target (claims 27-35) and a method for detecting the relative binding affinity of compounds in a combinatorial mixture for a biomolecular target (claims 53-55), classified in class 435, subclass 6 or 7.1.

IV. Claims 36-48, drawn to a method for identifying a compound which binds to a preselected biomolecular target (claims 36-41) and a method for identifying in a combinatorial mixture compounds (claims 42-48), classified in class 435, subclass 6 or 7.1.

V. Claims 56-71, drawn to a method for screening a plurality of biomolecular targets against a binding agent (claims 56-61), a method for screening a plurality of biomolecular targets against a combinatorial library of compounds (claims 62-66),

and a method of screening multiple biomolecular targets against a ligand (claims 67-71), classified in class 435, subclass 6 or 7.1.

VI. Claims 72-81, drawn to a method for determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule (claims 72-77) and a method of identifying chemical ligands which bind with high specificity and affinity to a molecular interaction site of an RNA (claims 78-81), classified in class 435, subclass 6 or 7.1.

VII. Claims 90-94, drawn to a method for identifying in a chemical mixture of compounds which bind to a biomolecular target, classified in class 435, subclass 6 or 7.1.

2. The inventions are distinct, each from the other because of the following reasons:

Groups I and II are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group II while the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group I.

Groups I and III are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group III while the search

required for Group III such as determining the relative binding affinity of a binding agent for a biomolecular target in claim 27 is not required for Group I.

Groups I and IV are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group IV while the search required for Group IV such as identifying a compound which binds to a preselected biomolecular target in claim 36 is not required for Group I.

Groups I and V are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group V while the search required for Group V such as screening a plurality of biomolecular targets against a binding agent in claim 56 is not required for Group I.

Groups I and VI are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group I while the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group I.

Groups I and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will

have to be performed. For example, the search required for Group I such as determining three dimensional structure of a nucleic acid in claim 1 is not required for Group VII while the search required for Group VII such as identifying in a chemical mixture of compounds which bind to a biomolecular target in claim 90 is not required for Group I.

Groups II and III are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group III while the search required for Group III such as determining the relative binding affinity of a binding agent for a biomolecular target in claim 27 is not required for Group II.

Groups II and IV are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group IV while the search required for Group IV such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group II.

Groups II and V are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group V while the search required for Group V such as screening a plurality of biomolecular targets against a binding agent in claim 56 is not required for Group II.

Groups II and VI are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group VI while the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group II.

Groups II and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group II such as identifying a binding site for a ligand on a biomolecular target in claim 13 is not required for Group VII while the search required for Group VII such as identifying in a chemical mixture of compounds which bind to a biomolecular target in claim 90 is not required for Group II.

Groups III and IV are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group III such as step (f) in claim 27 is not required for Group IV while the search required for Group IV such as fragmenting step in claim 72 is not required for Group III.

Groups III and V are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group III such as determining the relative binding affinity of a binding agent for a biomolecular target in claim 27 is not required

for Group V while the search required for Group V such as screening a plurality of biomolecular targets against a binding agent in claim 56 is not required for Group III.

Groups III and VI are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group III such as determining the relative binding affinity of a binding agent for a biomolecular target in claim 27 is not required for Group VI while the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group III.

Groups III and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group III such as determining the relative binding affinity of a binding agent for a biomolecular target in claim 27 is not required for Group VII while the search required for Group VII such as identifying in a chemical mixture of compounds which bind to a biomolecular target in claim 90 is not required for Group III.

Groups IV and V are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group IV such as step (a) in claim 42 is not required for Group V while the search required for Group V such as step (b) in claim 56 is not required for Group IV.

Groups IV and VI are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will

have to be performed. For example, the search required for Group IV such as identifying a compound which binds to a preselected biomolecular target in claim 36 is not required for Group VI while the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group IV.

Groups IV and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group IV such as identifying a compound which binds to a preselected biomolecular target in claim 36 is not required for Group VII while the search required for Group VII such as identifying in a chemical mixture of compounds which bind to a biomolecular target in claim 90 is not required for Group IV.

Groups V and VI are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group V such as screening a plurality of biomolecular targets against a binding agent in claim 56 is not required for Group VI while the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group V.

Groups V and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group V such as step (b) in claim 56 is not required for Group VII while the search required for Group VII such as step (b) in claim 90 is not required for Group V.

Groups VI and VII are distinct and independent inventions in that they are directed to methods which comprise different method steps. As a result, different and distinct searches will have to be performed. For example, the search required for Group VI such as determining the nature and extent of binding of a ligand with a molecular interaction site of a biomolecule in claim 72 is not required for Group VII while the search required for Group VII such as identifying in a chemical mixture of compounds which bind to a biomolecular target in claim 90 is not required for Group VI.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

3. Group I contains claims directed to the following patentably distinct species:

(1) said ion fragmentation involves collision-induced dissociation (claim 11)

(2) said ion fragmentation involves infrared multiphoton dissociation (claim 12)

The species are independent or distinct because these species are directed to different ion fragmentation methods.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 1-10.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

4. Group II contains claims directed to the following patentably distinct species:

(3) said biomoleculce target is a nucleic acid (claims 14, 15, 20, 51, and 52)

(4) said biomoleculce target is a peptide or protein or glycopeptide (claim 19)

(5) said biomoleculce target is an antibody (claim 19)

(6) said biomoleculce target is a carbohydrate or oligosaccharide (claim 19)

The species are independent or distinct because these species are directed to different products.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 13, 15-18, 21-26, 49, 50, and 82-89.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

5. Group II further contains claims directed to the following patentably distinct species:

(7) said ion fragmentation involves collision-induced dissociation (claim 23)

(8) said ion fragmentation involves infrared multiphoton dissociation (claim 24)

The species are independent or distinct because these species are directed to different ion fragmentation methods.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 13-22, 49-52, and 82-89.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

6. Group III contains claims directed to the following patentably distinct species:

(9) said biomoleculce target is a nucleic acid (claims 29, 30, 34, 20, and 55)

(10) said biomoleculce target is a peptide or protein or glycopeptides (claim 33)

(11) said biomoleculce target is an antibody (claim 33)

(12) said biomoleculce target is a carbohydrate or oligosaccharide (claim 33)

The species are independent or distinct because these species are directed to different products.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 27, 28, 31, 32, 35, 53, and 54.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

7. Group IV contains claims directed to the following patentably distinct species:

(13) said biomoleculce target is a nucleic acid (claims 37, 38, 44, and 45)

(14) said biomoleculce target is a peptide or protein or glycopeptides (claims 40 and 48)

(15) said biomoleculce target is an antibody (claims 40 and 48)

(16) said biomoleculce target is a carbohydrate or oligosaccharide (claims 40 and 48)

The species are independent or distinct because these species are directed to different products.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 36, 39, 41-43, 46, and 47.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

8. Group V contains claims directed to the following patentably distinct species:

(17) said biomoleculce target is a nucleic acid (claims 58, 64, and 69)

(18) said biomoleculce target is a mixture of proteins (claim 71)

The species are independent or distinct because these species are directed to different products.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 56, 57, 59-63, 65-68, and 70.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable

thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

9. Group VI contains claims directed to the following patentably distinct species:

(19) said ion fragmentation involves collision-induced dissociation (claims 76 and 80)

(20) said ion fragmentation involves infrared multiphoton dissociation (claims 76 and 80)

The species are independent or distinct because these species are directed to different ion fragmentation methods.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, generic claims are claims 72-75, 77-79, and 81.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

10. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CAR § 1.6(d)). The CM Fax Center number is (571)273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Lu, Ph.D., whose telephone number is (571)272-0746. The examiner can normally be reached on Monday-Friday from 9 A.M. to 5 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla, can be reached on (571)272-0735.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Frank Lu
Primary Examiner
March 2, 2006

FRANK LU
PRIMARY EXAMINER